PERFORMANCE SPECIFICATIONS FOR BLASTING SEISMOGRAPHS

GENERAL SPECIFICATIONS

Ground Vibrations Measurement:

Frequency range…….	2 to 250 Hz, within zero to -3 dB of an ideal flat response
Accuracy……..	±5 pct or ±0.02 in/sec (0.5 mm/sec), whichever is larger, between 4 and 125 Hz
Phase response……	See Level #2
Cross-talk response……	See Level #2
Density of transducer jug…….	<150 lbs/ft^3 (should be reported for user consideration)

Airblast Measurement:

Frequency range……..…	2 to 250 Hz flat, -3 dB at 2 Hz ±1dB
Accuracy……	±10 pct or ±1 dB, whichever is larger, between 4 and 125 Hz.

General Requirements:

Digital sampling……..	1000 samples/sec or greater, per channel
Operating temperature……..	10 to 120^{0}F (-12 to 49^{0}C)

Measurement Practices:
Specified in a separate specification: Seismograph Field Practice Guidelines

SPECIFIC USER NEEDS

Some requirements are specific to a user, an application, or a regional need. General Specifications listed above are to be considered minimums. Additional requirements can be requested by a customer, such as, use under arctic-type conditions requiring good performance at low temperatures or extended frequency ranges such as might be of concern for close-in construction blasting.

Other performance capabilities related to specific needs are:

1. Dynamic range (smallest to highest usable measurement)
2. Resolution
3. Trigger levels and options (vibration, airblast or both)
4. Recording duration (per event)
5. Memory or record capacity (number of events)
6. Nature of display and recording (hard copy, LCD, downloading, etc.)
7. Mounting options (transducer attitude, orientation, etc.)

International Society of Explosives Engineers
Blast Vibrations and Seismograph Section
30325 Bainbridge Road • Cleveland, Ohio 44139-2295
Tel: 440-349-4400 • Fax: 440-349-3788 www.isee.org